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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,620	01/29/2004	Sunil Kesavan	1356-014	5660

25215 7590 02/08/2007
DOBRUSIN & THENNISCH PC
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SUITE 210
PONTIAC, MI 48342

EXAMINER

NGUYEN, THUKHANH T

ART UNIT	PAPER NUMBER
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1722

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/767,620

Applicant(s)

KESAVAN ET AL.

Examiner

Thu Khanh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-9 and 54-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-9, 54-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-9 and 54-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winget (6,164,953) in view of Kim (6,776,942).

Kim discloses a mold for molding plastic material, comprising a first mold member (11) and a second mold member (13), wherein the mold members movable relative to each other between an open position and a closed position forming a cavity (16) in between (col. 3, lines 51-56), wherein the mold members (11, 13) include a pair of porous parts/sections (12, 14) formed within the mold members for removing gas and volatiles trapped at the article surfaces and releasing to the atmosphere (col. 4, lines 23-29), wherein the porous sections are made of metal (col. 4, lines 12-16).

However, Winget fails to disclose that the porous sections has a porosity between about 5% -25% and an average pore diameter between 1-280 micron.

Kim discloses a mold made from a porous metal material that has a porosity of about 5% to about 50% and has a range of average pore diameters from about 3 to about 10 micron (col. 5, lines 38-53), so that the molding can be performed while applying a vacuum during the molding cycle to create a suction on the exterior surfaces of the porous metal that pulls vent gases through

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the porous metal out of the cavity to enhance venting and reduces formation of pin marks and knit lines (col. 5, lines 26).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Winget by providing the porous member having a porosity of about 5%-50% and has average pore diameters between 3 –10 micron as taught by Kim, because the mold member having these properties would enhance venting from the mold cavity during molding and would reduce formation of unwanted marks on the products.

In regard to claim 3, Kim discloses the porosity of about 1-10 micron. One of ordinary skilled in the art would have been motivated to modify the porosity to up to 15 micron depending on the material being formed, the temperature and pressure of the cavity during the molding process. It is well settled that determination of optimum values of cause effective variables such as these process parameters is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

In regard to claims 5 and 54, Winget discloses that the metal porous member or the gas permeable section is aluminum (co. 4. lines 13-19).

In regard to claims 6-8 and 56-61, Winget is capable of operating at a high temperature and high pressure because gases and volatiles are built up in the mold cavity during the molding process. Further, the operating condition of the apparatus can not be used to determine the patentability of apparatus claims. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device *is*, not what a device *does*."

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Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). (Emphasis in original)

It has been held that a functional limitation asserted to be critical for establishing novelty may, in fact, be an inherent characteristic of the prior art. The applicants is required to prove that the subject matter shown in the prior art does not necessarily possess the characteristics relied on. *In re Schreiber*, 128 F. 3d 1473, 1478, 44 USPQ 2d, 1432 (Fed. Cir. 1997); *See also, In re Spada*, 911 F 2d 705, 708, 15 USPQ 2d 1655, 1658 (Fed. Cir. 1977); *In re Best*, 562 F. 2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977); and *Ex Parte Gray*, 10 USPQ 2d 1922, 1925 (Bd. Pat. App. & Int. 1989).

In regard to claim 9, Winget discloses that the mold is used for molding/compressing different plastic material such as SMC body panels, that inherently includes a friction material or phenolic resin or a reinforcement structure. Furthermore, "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "[i]nclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re Young*, 75 F.2d 996, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). MPEP § 2115.

In regard to claim 55, Winget fails to disclose that the entire mold comprises micro-porous sintered aluminum. Kim discloses that the entire mold is made of porous metal to improve the venting from the mold cavity to improve the durability and cosmetic quality of the molded product (col. 4, lines 19-21). It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify Winget by provide the entire mold

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made of porous material as taught by Kim in order to enhance venting from the mold cavity during the molding process.

In regard to claim 62, wherein the second mold member (13) include a mold body (13, 14).

3. Applicant's arguments with respect to claims 3-9 and 54-62 have been considered but are moot in view of the new ground(s) of rejection.

Winget and Kim, in combination, disclose a molding apparatus having different mold sections or the entire mold member made of porous metal material to improve the venting of gasses built up in the cavity during the molding process. Wherein the operating conditions, such as pressure and temperature are depending on the amount and the kind of material being used and would have been within the scope of a skilled artisan to determine the proper conditions for each material. The material being used would depend on the desired properties of the final product and would also be obvious to one of ordinary skilled in the art. The porosity and the pore diameters of the material being used to form the mold would obviously have been modified by one of ordinary skilled in the art base on the teaching of Kim and Winget and the operating conditions and/or material being formed.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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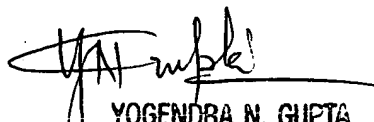
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thu Khanh T. Nguyen whose telephone number is 571-272-1136. The examiner can normally be reached on Monday- Friday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gupta Yogendra can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN
1/25/07


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